

# **HOME MODIFICATIONS TO IMPROVE SAFETY AND MOBILITY**

Transitioning to Home for the Stroke Survivor

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- ▶ **Requirement of Learner**

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- ▶ **Commercial Support**

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- ▶ **Disclosure of Financial Conflict of Interest**

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# Make Use of Your Therapists

- ▶ Speech Therapy
- ▶ Occupational Therapy
- ▶ Physical Therapy
- ▶ Respiratory Therapy

# Home Modifications

- **Renovating the Structure**
  - Home modifications to fit new equipment
    - Cost
- **Modifying the Environment**
  - The alternative to costly renovations is to modify your home environment
    - Remove barriers
    - Add assistive devices
- Keep space **SAFE** and **ACCESSIBLE**

# Sensory and Environmental Awareness Changes following Stroke

- ▶ Vision
  - Field of Vision Loss
  - Acuity Changes
  - Visual Perception
  - Vestibular
- ▶ Tactile Sensation
- ▶ Proprioception
- ▶ Strength
- ▶ Neurogenic Changes
- ▶ Balance/Coordination Changes
- ▶ Cognitive Changes

# General Safety Recommendations

- ▶ Good Lighting/Light switches easily accessed
- ▶ Keep pathways clear
- ▶ Nonslip foot wear
- ▶ Remove trip hazard/keep floor in good repair
- ▶ Furniture is sturdy and appropriate height
- ▶ Assistive equipment present & used correctly
- ▶ Windows, doors and cabinets open easily
- ▶ Floor level changes are clearly marked/rails
- ▶ Phone or emergency alert system within reach

# Assistive Technology

From simple inexpensive environmental controls to complex systems.

# Allow Extra Time

- ▶ Don't rush!
- ▶ Use your assistive equipment
- ▶ When in doubt, don't
- ▶ Wait for assistance if needed
- ▶ Discuss your challenges with your therapist
- ▶ Set goals with your therapist



Pets can be a cause of falls, interact carefully! ➤

# Outdoor Considerations

- Repair uneven, cracked, or broken sidewalks/pathways
- Keep sidewalks clear of clutter such as fallen leaves, lawn décor, and ice
- Identify the most accessible home entrance / exit
- Be aware of ditches between sidewalk and grass.
- Can color contrast the right and left sides of sidewalk with paint or use a “mini” fence or border



**NO**

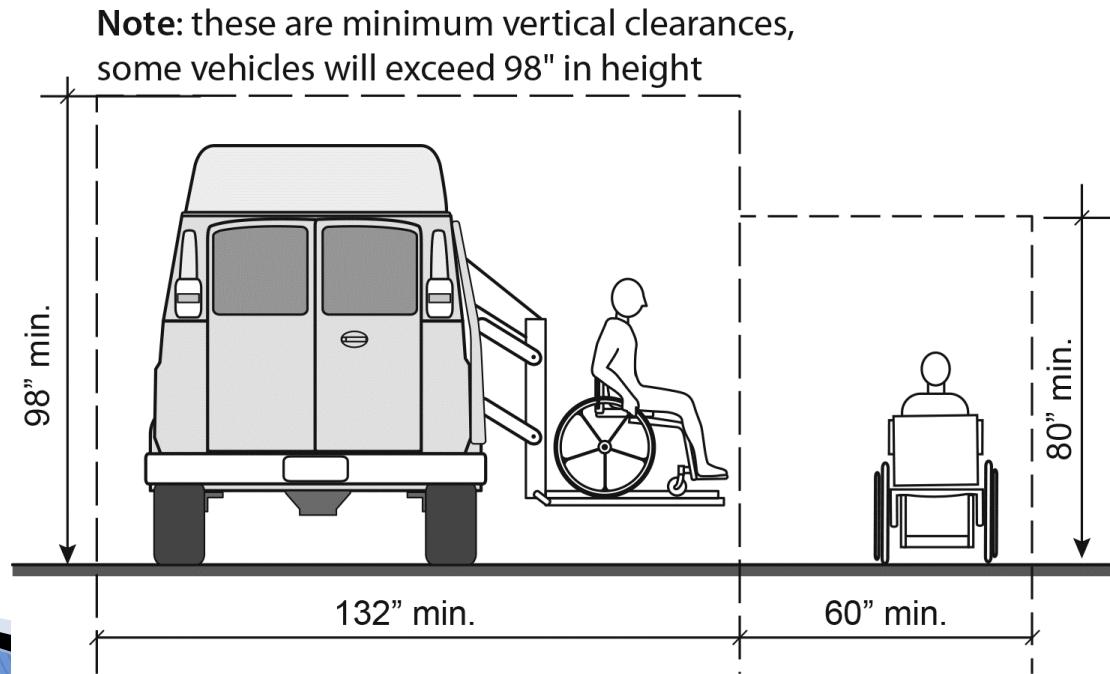


**YES**



# Outdoor Considerations

- ▶ Leave enough space in driveway or garage to accommodate wheelchair and/or wheelchair lift from car



Van Parking Space Vertical Clearance

# Outdoor Considerations

- ▶ If using wheelchair or unable to climb stairs, a ramp may be necessary to access home
- ▶ The following specifications are recommended by the ADA:
  - The least possible slope shall be used for any ramp.
  - The maximum slope of a ramp in new construction shall be 1:12.
  - The maximum rise for any ramp run shall be 30 inches.
  - The minimum width of a ramp shall be 36 inches.
  - Ramps shall have level landings at the bottom and top of each run.
  - Landings shall have the following features:
    - The landing shall be at least as wide as the widest ramp run leading to it.
    - The landing length shall be a minimum of 60 inches clear.
    - If ramps change direction at landings, the minimum landing size shall be 60 inches x 60 inches.
- ▶ If a ramp run has a rise greater than 6 inches or a horizontal projection greater than 72 inches, then it shall have handrails on both sides

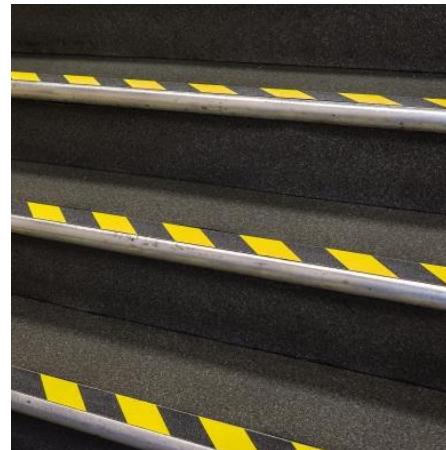
# Outdoor considerations

- ▶ Consider having an overhang/protected area at entrance to home
- ▶ Keyless entry pads
- ▶ Door handles which are easy to operate and do not require grip strength to open



# Outdoor Considerations

- ▶ Good lighting and /or automatic light sensors
- ▶ If able to go up/down steps, add railing to one or both sides
- ▶ Color contrast railing if vision is impaired
- ▶ Add reflective and/or skid proof tape to front of each step
- ▶ Do not use a screen door to avoid need to hold it open while stepping through doorway
- ▶ Add a small bench or table by entry to home to place items while unlocking and opening door
- ▶ Consider adding grab bar to step through doorway



# Outdoor Considerations

## Set Ups to Avoid



02/11/2007

# Outdoor considerations

- ▶ GOOD examples of ramps:



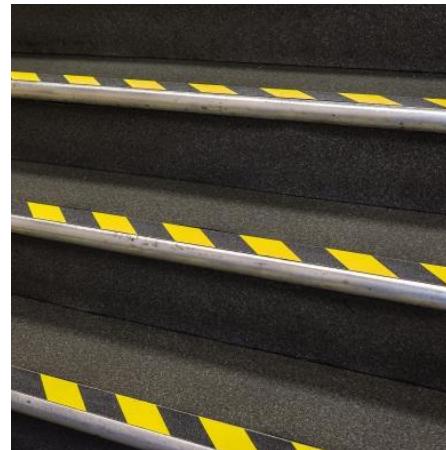
# Outdoor Considerations

- ▶ A threshold ramp may be necessary for some doorways (may apply to indoor areas as well)
- ▶ Consider adding a grab bar or hand rails



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# Interior Considerations

## ▶ Living Room:

- Ensure clear open pathways to access furniture
- Remove low sitting or bulky furniture, be cautious of sharp edges on coffee tables and end tables
- Consider height of furniture, arm rests, and firmness of cushions to ensure safety with transfers
  - Adding furniture risers under legs of couches/chairs
  - Place ply wood under seat cushion if too soft
  - Consider lift chair
- Add non slip rubber mats under legs of furniture or in front of couches/chairs



# Interior Considerations

## ► Bedroom

- Consider height of bed
  - If too low, may add lifters or box spring if not already present
  - If too high, may consider cutting down wooden legs, replacing box spring with plywood
- If bed is on wheels, ensure locks are sturdy or remove wheels all together



# Interior Considerations

## ▶ Bedroom

- Consider adding bed rail to assist in bed mobility
- Specialized pillows such as wedges and boomerang pillows to assist with positioning

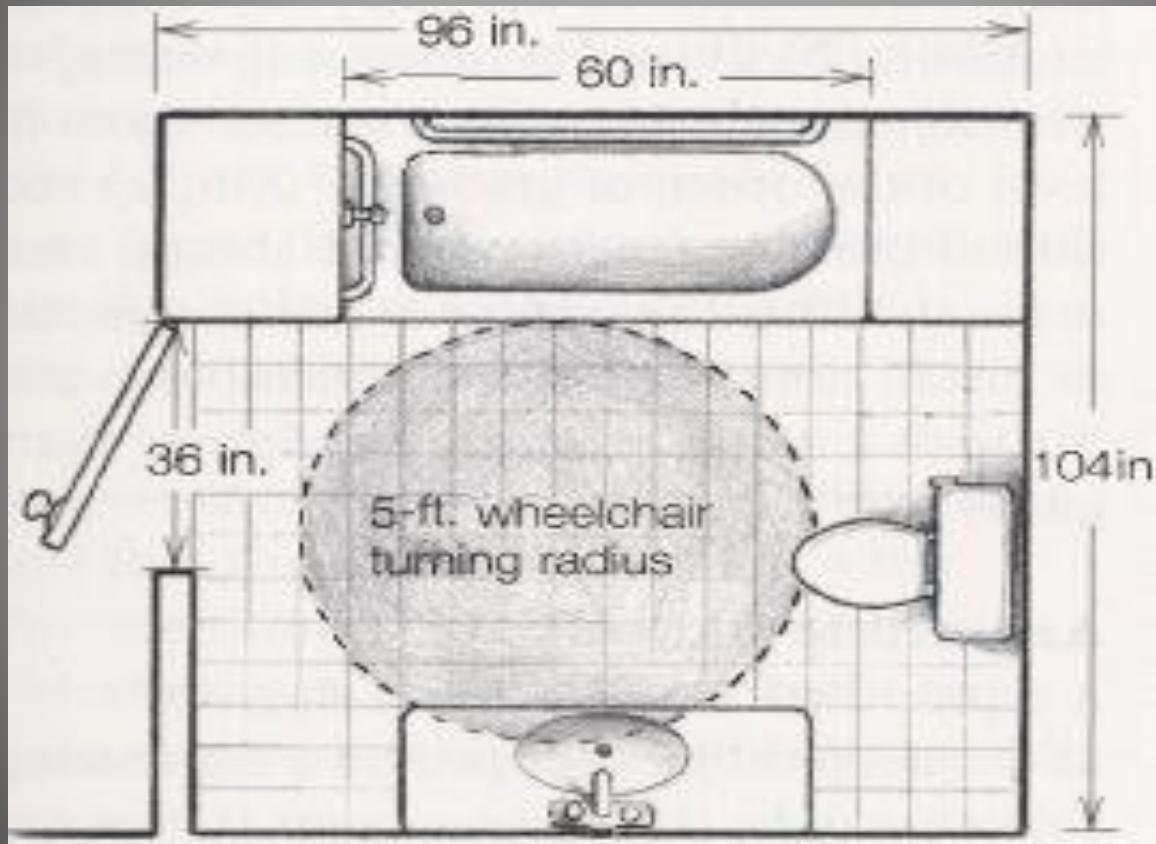


# Bathroom and Kitchen Modifications

- ▶ Enlarge doorway for WC accessibility
  - Remove door framing
  - Recessed hinges
  - Remove door
  - Use of double doors
- ▶ Safety/Fall prevention
  - open and clutter free
  - turning radius for WC
  - accessibility of items
- ▶ Promote independence
  - modify the space
  - adaptive equipment



# Bathroom Modifications



# Open vanity and wall mounted sink for wheelchair access



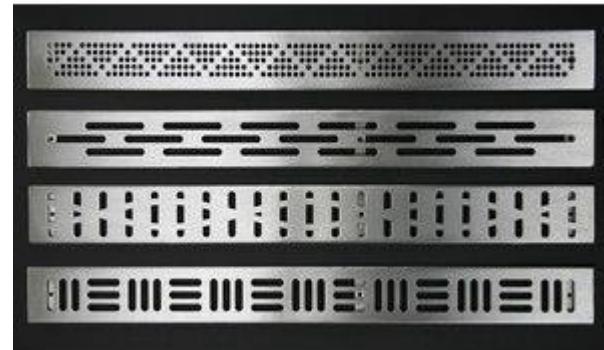
# Walk-in and Roll-in Shower Stalls



# Accessible shelving



# Walk-in Shower Thresholds



# Bathroom Modifications

- Assistive devices and durable medical equipment
  - Grab bars
  - Raised toilet seat
  - Tub bench/shower chair
  - Hand-held shower head
  - Non-slip bath mat
  - Bidet

# Adaptive and Safety Devices



# Adaptive Equipment

## Custom grab bars



[www.mrgrabbar.com](http://www.mrgrabbar.com)

# Grab bar Placement

Ideally grab bar should be placed on unaffected side

- ▶ Horizontal grab bars are recommended
- ▶ ADA recommends placement 33–36" high
  - Ensure grab bar is mounted to a stud
  - Modify placement of grab bars to meet specific needs

# Grab Bar Placement



# Shower chairs and benches

- ▶ Multiple options available
  - swivel seats
  - lateral and back supports
  - removable armrests
  - tilt/recline
  - padded seat

# Shower chairs and benches



\$98  
Walmart



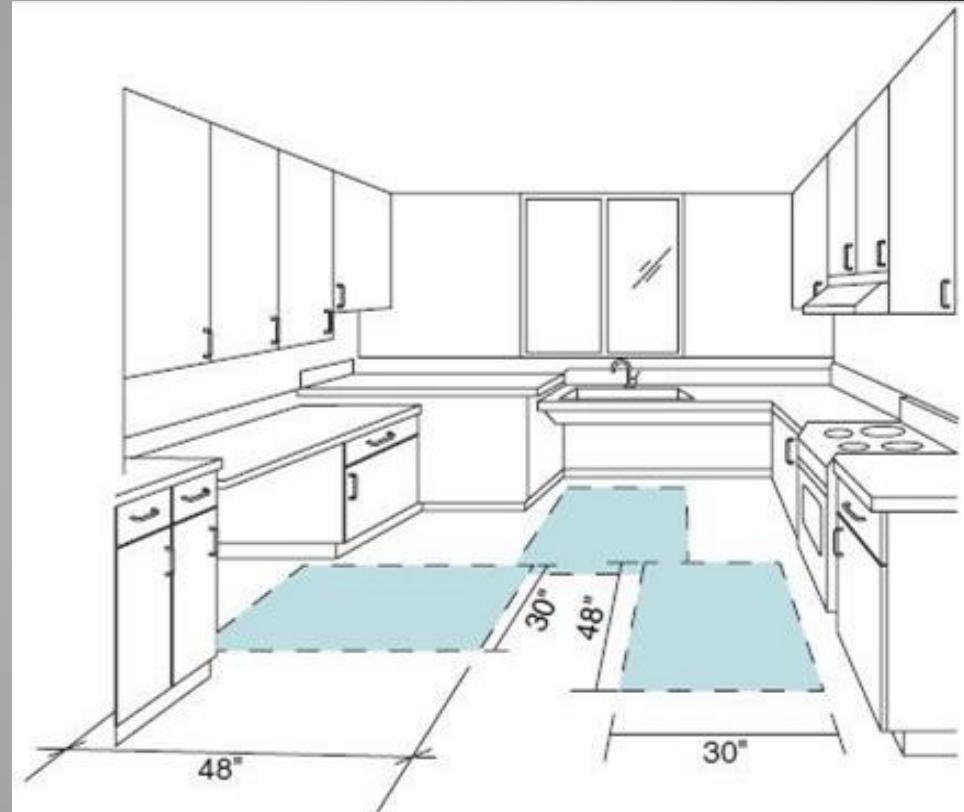
\$164 Amazon



\$309  
[careprodx.com](http://careprodx.com)

# Kitchen Modifications

- ▶ Open and accessible
  - open doorway and turning radius for WC
  - lower shelves and appliances
  - keep most commonly used items on accessible shelves
  - outlets and appliance knobs within reach



*Provide a clear floor space of 30x48 inches either parallel or perpendicular to the front of the sink, dishwasher, cooktop, oven, and refrigerator. These spaces should be centered on the fixture or appliance and may overlap. The clear spaces can include toe-kick space (minimum 9 inches high to accommodate most wheelchair footrests) or up to 19 inches deep of knee space.*



# QUESTIONS????



THANK YOU FOR YOUR TIME AND ATTENTION ➤

Come visit us!

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